FEMP 29
Renewable Energy Technology Applications
Integration of Renewable Energy Systems

Renewable energy technologies can help Federal sites meet agency goals and legislative mandates, improve energy security, and reduce environmental impact while efficiently providing electricity, heating, cooling, and other applications. This course will introduce learners to renewable energy system integration (ESI) from the building to the utility level.

This course addresses how increasing amounts of intermittent renewable energy generation can be controlled to realize energy cost savings and improve system reliability.

By taking this course, learners will be able to:

- Participate in "Integrated Resource Planning" with other stakeholders to determine what resources should be deployed to meet the system load.
- Understand the challenges and solutions for renewable energy system integration at the building, substation, and grid levels.
- Identify strategies to increase amounts of intermittent renewable energy onto the grid.

Instructor
The instructor for this series is Andy Walker, PhD, Principal Engineer at the National Renewable Energy Laboratory. At NREL, Dr. Walker conducts engineering and economic analysis of renewable energy projects for FEMP and other non-governmental clients. Dr. Walker is an instructor and has authored more than 28 book chapters, journal articles, and papers. He holds a bachelor's of science degree, a master's of science degree, and a doctorate degree in mechanical engineering from Colorado State University and is a registered Professional Engineer in the State of Colorado.